



TY 10 Substitute W3/W2 2-D Barcoding Standards

*Version 1.2
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History Log

Version	Date	Summary of Changes	Editor
0.1	02/01/10	Version 0.1	OCO
1.0	03/03/10	Comments incorporated.	OCO
1.1	05/05/10	NACTP comments incorporated Modified W3 barcode layout in response to HIRE legislation Removed 'positioning' layout from barcode for clarity	OCO
1.2	07/16/10	Added box # to Employer country Removed W2 box 12c future use Expanded W2 state ID max field length to 26 Removed (W2) from W2 Form description Expanded W2 Control Number to 21 positions Expanded ER and EE address line to 41 positions. SSA will truncate to 22 positions. Combined 'Other 1 -4' amount and text boxes on W2 to 'Other 1 – 4' alphanumeric.	OCO

Substitute W3/W2

2D Barcoding Standards

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1. Overview

This document covers only the 2D barcode on substitute forms W3/W2. Information and specifications for Substitute Forms W2/W3 can be found in IRS Publication 1141 - General Rules and Specifications for Substitute Forms W-2 and W-3.

The 2D barcode is intended to represent the information on the paper W-2/W-3 form. In a situation where multiple W-2 forms are provided to an employee from one employer (for instance, an employee has more state withholding information than can be fit on a single form) a barcode will be placed on each W-2 form and will only contain the data on that form.

This version will comply with the computerized industry standards. If a software developer does not support 2-D barcodes, the area reserved for the barcode should be left blank.

A general rule that can be used to determine if a printer is capable of producing a 2-D barcode is if the printer can produce a graphic such as an agency seal or business logo, then the printer should be capable of producing a 2-D barcode that can be scanned.

2. General Standards -

- The barcode will be a 2-D barcode in the PDF-417 format. The PDF 417 has error detection and correction capabilities. The error correction level should be set to level 4.
- All fields within the barcode are followed by a carriage return <cr>
- All fields are required, although a field can be left empty (leaving just the field terminating <cr>). *Exception:* Federal ID fields may not be left empty.
- Do not zero fill or fill with spaces if a field is to be left blank. If there is no data, a field should be left empty followed by a terminating <cr>. It is up to the decoder to determine how to handle empty fields. *Exception:* Federal ID fields must be zero filled if no data is available.
- *EOD (End of Data):* the final field in the data stream should be the characters *EOD* followed by a <cr>.
- Stretching or scaling the barcode changes its integrity and reduces the readability of the barcode; it should not be used.

3. Approval Procedures –

- Software vendors should provide up-to-date contact information including accurate email addresses when submitting forms for approval.
- SSA can provide vendor codes for non-NACTP submissions.
- Test scenarios for 2-D barcode testing are via PDF.
- The format of the Form and the 2-D barcode data will be approved separately and simultaneously, if possible, to expedite the approval process. SSA will indicate exactly what is being approved.
- SSA requests 2 sheets of forms with test data for approval. If submitting a 2-D barcode for approval, at least one sheet with 2-D barcode sample must be a 'max-fill' sample. Samples with data fields that are maximum filled must have data in all fields. The data in the remaining 2-D barcode samples should reflect the data on the sheets.
- SSA requests one printout of a blank form (without data).
- The vendor number must be displayed on all pages generated.

4. Duration of Approvals

- Approvals are valid for only one tax year (January through December)
- In general, each new filing season requires new approval, even if the official form does not change.

Any questions about the bar-coded laser-printed Form W-2 (Copy A) and Form W-3 should be emailed to *laser.forms@ssa.gov* or sent to:

Social Security Administration
Data Operations Center
Attn: Laser Forms Approval, Room 348
1150 E. Mountain Drive Wilkes-Barre, PA 18702-7997

5. Barcode Specifications

- The barcode is defined as a 2-D barcode in the PDF-417 format. The PDF 417 has error detection and correction capabilities. The error correction level should be set to level 4.
- The Y/X ratio will be 2.
- The Mode setting will be ASCII to cover alphanumeric characters.
- The truncate symbol setting should be off to allow for right-side end bars.
- All fields within the barcode will use the carriage return <cr> as a field delimiter.

- All fields are required. If no data is provided, the barcode data for that field will be blank followed by the <cr> delimiter. *Exception:* Mandatory data fields may not be left empty.
- If there is no data for a field entry, the field should be left empty. Do not zero fill or pad with spaces if a field is to be left blank *Exception:* Mandatory data fields such as Federal ID must be zero filled if no data is available.
- *EOD (End of Data):* the final field in the data stream should be the characters *EOD* followed by a <cr>.
- Stretching or scaling the barcode changes its integrity and reduces the readability of the barcode; it should **not** be used.

6. 2D Barcode Rules

- Money fields must:
 - Contain only numbers
 - No punctuation
 - No signed amounts (high order signed or low order signed).
 - No negative amounts
 - Include both dollars and cents with the decimal point assumed (example: \$59.60 = 5960)
 - Do not round to the nearest dollar (example: \$5,500.99 = 550099)
- Address Fields
 - Must conform to U.S. Postal Service rules since address fields are used by SSA to prepare mail correspondence, if necessary. For more information:
 - See U.S. Postal Service Publication 28; or
 - View the U.S. Postal Service website at:
pe.usps.com/businessmail101/addressing/deliveryAddress.htm
 - Call the U.S. Postal Service at 1-800-275-8777.
 - For State, use only the two-letter abbreviations
- Employer EIN
 - Only numeric characters
 - Omit hyphens
 - Do not begin with 00, 07, 08, 09, 17, 18, 19, 28, 29, 49, 69, 70, 78, 79, or 89.
 - The employer EIN should normally match the EIN under which tax payments were submitted to the IRS under Form 941, 943, 944, CT-1 or Schedule H.
- Employee Name
 - Enter the name exactly as shown on the individual's Social Security Card
 - Employee First Name
 - Employee Middle Initial

- Employee Last Name
 - Suffix (if shown on Social Security Card)
- Do not include any titles
- Social Security Number (SSN)
 - Use the number shown on the original /replacement SSN card
 - Only numeric characters
 - Omit hyphens
 - May not begin with an 8 or 9
 - Do not enter a fictitious SSN (for example, 111111111, 333333333 or 123456789).
 - For valid range numbers, check the latest list of newly issued Social Security number ranges on the Internet at www.socialsecurity.gov/employer/ssnvhighgroup.htm.
 - If there is **no SSN available** for the employee, enter **zeros (000000000)** and have your employee call 1-800-772-1212 or visit their local Social Security office to obtain an SSN.

7. Field Types

Field Type	Data Limitations	Print Format	2-D Barcode Format
Text	<ul style="list-style-type: none"> • All printable characters allowed • No leading or trailing blanks 		
Amount	<ul style="list-style-type: none"> • Money fields • Only characters 0-9 allowed • Right justified, no leading zeros 	999999999.99	99999999999
Numeric	Only characters 0-9 allowed		
Checkbox	Must be capital "X" or empty		
Federal ID	<ul style="list-style-type: none"> • Only characters 0-9 allowed • Must contain exactly nine characters • May not be left blank. Zero fill if no ID is available 	999-99-9999 99-9999999	9999999999

8. W3 Barcode Layout

<u>Description</u>	<u>Box # on Form</u>	<u>Field Type</u>	<u>Max Field Length</u>	<u>Field Notes</u>
Header Version Number		Text	2	Version of general 2-D specs used to create this barcode. This field is static. Currently, the text "T1"
Developer Code		Numeric	4	Vendor's NACTP ID or SSA provided ID. This field can be blank.
Form Description		Numeric	5	33333
Form Year		Numeric	4	Four digit year
Specification Version		Text	5	Version of this specification used to create this barcode. Currently, the text "10.01"
Software ID		Text	30	Software product used to create this barcode. Should indicate product name and version.
Control Number	a	Text	16	This field is not used by SSA for paper processing. This field is used for numbering the whole transmittal. This field can be blank.
Employer Identification Number (EIN)	e	Federal ID	9	Numeric Only numeric characters • Omit hyphens Must NOT begin with 00, 07, 08, 09, 17, 18, 19, 28, 29, 49, 69, 70, 78, 79 or 89.
Kind of Payer – 941	b	Check Box	1	"X" Only one Kind of Payer box can be checked unless the 2 nd one is the 3 rd party sick pay box.

SSA's TY10 Substitute W3/W2 2D Barcoding Standards

Description	Box # on Form	Field Type	Max Field Length	Field Notes
Kind of Payer – Military	b	Check Box	1	“X” Only one Kind of Payer box can be checked unless the 2 nd one is the 3 rd party sick pay box.
Kind of Payer – 943	b	Check Box	1	“X” Only one Kind of Payer box can be checked unless the 2 nd one is the 3 rd party sick pay box.
Kind of Payer – 944	b	Check Box	1	“X” Only one Kind of Payer box can be checked unless the 2 nd one is the 3 rd party sick pay box.
Kind of Payer – CT1	b	Check Box	1	“X” Only one Kind of Payer box can be checked unless the 2 nd one is the 3 rd party sick pay box.
Kind of Payer – Household	b	Check Box	1	“X” Only one Kind of Payer box can be checked unless the 2 nd one is the 3 rd party sick pay box.
Kind of Payer – Medicare Gov Emp	b	Check Box	1	“X” Only one Kind of Payer box can be checked unless the 2 nd one is the 3 rd party sick pay box.
Third -Party Sick Pay Indicator	b	Check Box	1	“X” Only one Kind of Payer box can be checked unless the 2 nd one is the 3 rd party sick pay box.
Total number of forms W-2	c	Numeric	7	
Establishment Number	d	AlphaNumeric	4	For multiple ER submissions with same EIN. Enter any combination of blanks, number or letters.

SSA's TY10 Substitute W3/W2 2D Barcoding Standards

Description	Box # on Form	Field Type	Max Field Length	Field Notes
Employer Name	f	Text	57	
Employer Address Line 1	g	Text	35	
Employer Address Line 2	g	Text	35	
Employer City	g	Text	35	
Employer State	g	Text	2	
Employer Postal Code	g	Text	9	Populated for non-foreign addresses only.
Employer Country	g	Text	32	For use with Foreign addresses –This field is not used by SSA for paper processing
Other EIN used this year	h	Numeric	9	Field can be blank; If not blank, the Other EIN must NOT begin with 00, 07, 08, 09, 17, 18, 19, 28, 29, 49, 69, 70, 78, 79 or 89. ▪ Omit hyphens.
Wages, Tips, other compensation	1	Amount	15	
Federal Income Tax withheld	2	Amount	15	
Social Security Wages	3	Amount	15	
Social Security Tax withheld	4	Amount	15	
Medicare wages and tips	5	Amount	15	
Medicare tax withheld	6	Amount	15	
Social Security tips	7	Amount	15	
Allocated tips	8	Amount	15	
Advance EIC payments	9	Amount	15	
Dependent Care Benefits	10	Amount	15	
Nonqualified plans	11	Amount	15	

<u>Description</u>	<u>Box # on Form</u>	<u>Field Type</u>	<u>Max Field Length</u>	<u>Field Notes</u>
Deferred compensation	12a	Amount	15	
HIRE Exempt	12b	Amount	15	TY10
For third-party sick pay use only	13	Text	26	This field is not used by SSA for paper processing. "Third-Party Sick Pay Recap"
Income tax withheld by payer of third-party sick pay	14	Amount	15	
State Code	15	Text	2	Appropriate postal numeric code
State ID number	15	Text	26	Employer's state ID number
State Wages	16	Amount	15	State wages, tips, etc.
State Withheld	17	Amount	15	State income tax
Local Wages	18	Amount	15	Local wages, tips, etc.
Local Withheld	19	Amount	15	Local income tax
End of Data indicator		*EOD*	5	*EOD*

9. W2 Barcode Layout

W2 Barcode Layout

<u>Description</u>	<u>Box # on Form</u>	<u>Field type</u>	<u>Maximum Field Length</u>	<u>Field Notes</u>
Header Version Number		Text	2	Version of general 2-D specs used to create this barcode. This field is static. Currently, the text "T1"
Developer Code		Numeric	4	Vendor's NACTP ID or SSA provided ID. This field can be blank.
Form Description /Form ID		Numeric	5	22222
Form Year (Tax Year)		Numeric	4	Four digit year

SSA's TY10 Substitute W3/W2 2D Barcoding Standards

<u>Description</u>	<u>Box # on Form</u>	<u>Field type</u>	<u>Maximum Field Length</u>	<u>Field Notes</u>
Specification Version		Text	5	Version of this specification used to create this barcode. Currently, the text "10.01"
Software ID		Text	30	Software product used to create this bar code. Should indicate product name and version.
Control Number	c	Text	21	This field is not used by SSA for paper processing. This field is used for numbering the whole transmittal. This field can be blank.
Employer Identification Number (EIN)	b	Federal ID	9	This is a required field <ul style="list-style-type: none"> o Enter only numeric characters o Omit hyphens o Must <u>not</u> begin with 00., 07, 08, 09, 17, 18, 19, 28, 29, 49, 69, 70, 78, 79 or 89
Employer Name	d	Text	41	
Employer Address Line 1	d	Text	41	SSA will truncate as needed
Employer Address Line 2	d	Text	41	
Employer City	d	Text	27	
Employer State	d	Text	2	For a foreign address, fill with blanks
Employer Postal Code	d	Text	9	
Employer Country		Text	41	For use with Foreign addresses
Employee SSN	a	Federal ID	9	No dashes
Employee First Name	e	Text	15	
Employee Middle Initial	e	Text	1	
Employee Last Name	e	Text	20	
Employee Suffix	e	Text	4	
Employee Address Line 1	f	Text	41	SSA will truncate as

SSA's TY10 Substitute W3/W2 2D Barcoding Standards

<u>Description</u>	<u>Box # on Form</u>	<u>Field type</u>	<u>Maximum Field Length</u>	<u>Field Notes</u>
				needed
Employee Address Line 2	f	Text	41	
Employee City	f	Text	27	
Employee State	f	Text	2	
Employee Postal Code	f	Text	9	
Employee Country	f	Text	41	For use with Foreign addresses
Wages, Tips, other....	1	Amount	11	
Federal Withholding	2	Amount	11	
Social Sec Wages	3	Amount	11	
Social Sec Tax	4	Amount	11	
Medicare Wages & Tips	5	Amount	11	
Medicare Tax	6	Amount	11	
Social Sec Tips	7	Amount	11	
Allocated Tips	8	Amount	11	
Advanced EIC	9	Amount	11	
Dependent care	10	Amount	11	
Non-qualified plan	11	Amount	11	
Code 1	12a	Text	2	These are for box 12; up to four box 12 items per form are supported.
Code 1 Year		Numeric	2	
Code 1 Amount	12a	Amount	11	
Code 2	12b	Text	2	
Code 2 Year		Numeric	2	
Code 2 Amount	12b	Amount	11	
Code 3	12c	Text	2	
Code 3 Year		Numeric	2	
Code 3 Amount	12c	Amount	11	
Code 4	12d	Text	2	
Code 4 Year		Numeric	2	
Code 4 Amount	12d	Amount	11	
Statutory Employee	13	Checkbox	1	
Retirement Plan	13	Checkbox	1	
Third Party Sick pay	13	Checkbox	1	
Other 1	14	Alpha-Numeric	15	These are for box 14; up to four box 14 items per form are supported. Description

SSA's TY10 Substitute W3/W2 2D Barcoding Standards

<u>Description</u>	<u>Box # on Form</u>	<u>Field type</u>	<u>Maximum Field Length</u>	<u>Field Notes</u>
				first followed by amount
Other 2	14	Alpha-Numeric	17	
Other 3	14	Alpha-Numeric	17	
Other 4	14	Alpha-Numeric	17	
State 1 Code	15	Text	2	
State 1 ID number	15	Text	18	
State 1 Wages	16	Amount	11	
State 1 Withheld	17	Amount	11	
State 2 Code	15	Text	2	
State 2 ID number	15	Text	18	
State 2 Wages	16	Amount	11	
State 2 Withheld	17	Amount	11	
Local 1 Name	20	Text	7	
Local 1 Wages	18	Amount	11	
Local 1 Withheld	19	Amount	11	
Local 2 Name	20	Text	7	
Local 2 Wages	18	Amount	11	
Local 2 Withheld	19	Amount	11	
End of Data indicator		Text	5	*EOD*